U.S. Department of Commerce
U.S. Patent and Trademark Office

**Privacy Threshold Analysis
for the
Patent End to End (PE2E) System**

U.S. Department of Commerce Privacy Threshold Analysis

USPTO Patent End to End (PE2E) System

Unique Project Identifier: PTOP-003-00

Introduction: This Privacy Threshold Analysis (PTA) is a questionnaire to assist with determining if a Privacy Impact Assessment (PIA) is necessary for this IT system. This PTA is primarily based from the Office of Management and Budget (OMB) privacy guidance and the Department of Commerce (DOC) IT security/privacy policy. If questions arise or further guidance is needed in order to complete this PTA, please contact your Bureau Chief Privacy Officer (BCPO).

Description of the information system and its purpose: *Provide a general description (in a way that a non-technical person can understand) of the information system that addresses the following elements:*

The E-Government Act of 2002 defines "information system" by reference to the definition section of Title 44 of the United States Code. The following is a summary of the definition: "Information system" means a discrete set of information resources organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information. See: 44. U.S.C. § 3502(8).

Patents End-to-End (PE2E) is a Master system portfolio consisting of next generation Patents Automated Information Systems (AIS). The goal of PE2E is to make the interaction of USPTO's users as simple and efficient as possible in order to accomplish user goals. PE2E will be a single web-based examination tool providing users with a unified and robust set of tools. PE2E will overhaul the current patents examination baseline through the development of a new system that replaces the existing tools used in the examination process. The project stakeholders desire a simple, unified interface that does not require launching of separate applications in separate windows, and that supports new and improved IT advances. There are 14 sub-systems under PE2E: DAV, OPD, CPC-DB, P-GD-PAD, P-OA2XML, P-ELP, PE2E-Search, OC, Patent Center, CEDR INFRA, S-DWP, S-OPSG, SLIC and P-STAR.

- **PE2E Docket Application Viewer (DAV)**
  Patents End to End (PE2E) Docket Application Viewer (DAV) is an automated information system (AIS) that provides a set of useful tools for the Patent examiners to manage and process the patent application in USPTO. The purpose of PE2E DAV is to provide examination tools for patent examiners to track and manage the cases in their docket and view documents in image and text format.

- **Cooperative Patent Classification (CPC-DB)**
  CPC is an International Patent Classification (IPC) based bilateral classification system that is jointly managed and maintained by the European Patent Office (EPO) and USPTO. The conversion from European Classification to Cooperative Patent Classification ensures IPC compliance and eliminates EPO requirement to classify U.S. patent documents. The USPTO conversion provides an up-to-date

internationally compatible classification system. CPC periodically receives non-sensitive PII files from USPTO contractors Reed Technology and Information Services (RTIS) Patent Data Capture (PDCap)/SERCO Patent Processing System (PPS). Also, CPC receives non-sensitive PII (i.e., USPTO and EPO Employee names, job titles and email address from CEDR-INFRA (formerly PALM-INFRA).

- **One Portal Dossier (OPD)**
  OPD is an IP5 collaborative platform initiative based on the international agreement between the IP5 Offices (Japan Patent Office [JPO], Korean Intellectual Property Office [KIPO], EPO, Chinese Patent Office [SIPO], and USPTO), to share non-sensitive patent data search and examination results held by each office for the purpose of facilitating inter-office collaboration amongst IP5 and USPTO Examiners/Officers only.

- **Patent Global Dossier Public Access Dossier (P-GD-PAD)**
  P-GD-PAD is a set of business services aimed at modernizing the global patent system and delivering benefits to all stakeholders through a single portal/user interface to all stakeholders with a secure one-stop USPTO-hosted User Interface that accesses related applications across the IP5 offices. The current users of P-GD-PAD are USPTO and IP5 patent examiners/officers. P-GD-PAD receives non-sensitive PII (i.e., name, correspondence address, and telephone number) from CEDR-INFRA (formerly PALM- INFRA).

- **Patents Office Action to XML (P-OA2XML)**
  P-OA2XML performs continuous automated conversion of previous Office Actions (Microsoft Word format) into Extended Markup Language (XML) format and captures/converts newly submitted official office actions into XML format as well. P-OA2XML processes and stores non-sensitive PII (i.e., applicant/examiner name, phone number, correspondence address) for public correspondence.

- **Patents - Electronic Library for Patents (P-ELP)**
  The P-ELP system maintains a content repository for USPTO's patent application images and patent-related text files and provides a means to store a variety of content forms. P-ELP also serves as a back-end service provider with no user interface.

- **Patent End to End Search (PE2E- search)**
  The Search for Patents (Search4P) system is a patent examiner search tool that replaces legacy search tools (Examiners Automated Search Tool (EAST) and the Web-based Examiners Search Tool (WEST)). Search4P contains patent published applications (US and foreign) and published nonpatent literature (i.e., books, articles, published research).

- **Official Correspondence (OC)**
  OC is a workflow tool which enables patent examiners and automation specialists to create and manage official office action text and forms as outgoing patent correspondence to patent applicants and their attorneys. OC receives non-sensitive

PII pertaining to USPTO employees (examiners) and applicants (i.e., name, examiner employee ID correspondence address, telephone number, fax, location, worker type code, and job class code) from CEDR-INFRA (formerly PALM-INFRA) for correspondence purposes; however, only employee IDs (examiner) are stored within the OC database.

- **Patent Center (PCTR)**
  PC is a web-based patent application and document submission tool to enable external users to file and manage their patent application.

- **Central Enterprise Data Repository Infrastructure (CEDR INFRA)**
  CEDR INFRA is transitioning as the replacement of the legacy PALM INFRA and is a next generation back-end database. CEDR INFRA maintains USPTO employee and contractor information such as names, date and place of birth, social security numbers (SSN) (all 9-digits for federal employee and the last 2-digits for contractor employees), employee ID, worker number, locations, organization, and correspondence address. It also provides functionalities to capture site, building, floor, classifications and search rooms. This information is required for subsequent Patent subsystems that track patent application prosecution, the location of the application, and Group Art Unit and Examiner productivity. CEDR INFRA synchronizes USPTO (federal) employee's information from the National Finance Center's (NFC) personnel/payroll system for pay purposes only.

- **Services – Document Wrapper for Patents (S-DWP)**
  S-DWP is a collection of business layer services that provides Patent next generation applications with backwards compatibility access to unpublished and published patent application images which are currently maintained on the legacy IFW system.

- **One Patent Service Gateway (S-OPSG)**
  The One Patent Services Gateway (S-OPSG) is the next-generation data services hub for USPTO Patent Applications. S-OPSG is unifying and replacing a plethora of legacy PALM and PALM-EXPO Enterprise Java Bean (EJB) and Simple Object Access Protocol (SOAP) web services with secure, high-performance RESTful services. These RESTful services will present as a set of unified interfaces defined by the Patent Common Domain Model (PCDM) and with improved auditing by the Patent History Service (PHS).

- **Patent -Service for time and Application Routing_(P-STAR)**
  P-STARS is an application information system that provides the organization with a better understanding of factors that impact examination times and helps the agency to make more informed decisions about examination time. By using CPC and historical PALM data, the P-STAR system will determine each examiner's proficiency with a given subject matter and attempt to use that data to assign future work to their docket, freeing Supervisors from performing that step manually.

- **Sequence Listing Information Control (SLIC)**
  SLIC (Sequence Listing Information Control) is the processing system for DNA, RNA & Protein Sequence Listings following ST.23, ST.25 and ST.26 international standards, and in accordance with 37 CFR §§ 1.821 – 1.825 "Application Disclosures Containing Nucleotide and/or Amino Acid Sequences". SLIC performs compliance verification of sequence listings in ST.23, ST.25 and ST.26 formats, and provides a workflow for review and data transformation for downstream intake components including Patents Content Management and Patent Search repositories.

a) *Whether it is a general support system, major application, or other type of system*
PE2E is a major application consisting of multiple applications.

b) *System location*
Madison building 600 Dulany Street, Alexandria, VA 22314

c) *Whether it is a standalone system or interconnects with other systems (identifying and describing any other systems to which it interconnects)*
PE2E interconnects with the following:

Enterprise UNIX Services (EUS): consists of assorted UNIX operating system variants (OS), each comprised of many utilities along with the master control program, the kernel.

Enterprise Desktop Platform (EDP): is an infrastructure information system, which provides a standard enterprise-wide environment that manages desktops and laptops running on the Windows 7 and Windows 10 operating system (OS), providing United States Government Configuration Baseline (USGCB) compliant workstations. The USGCB security mandate by the Office of Management and Budget (OMB) requires all Federal Agencies, including the United States Patent and Trademark Office (USPTO), to use the directed desktop configuration.

Enterprise Monitoring and Security Operations (EMSO): EMSO provides a centralized command and control console with integrated enterprise log management, security information and event management, network behavior analysis, and reporting through the collection of events, network/application flow data, vulnerability data, and identity information.

Enterprise Windows Services (EWS): is an Infrastructure information system, and provides a hosting platform for major applications that support various USPTO missions.

Network and Security Infrastructure (NSI): is an Infrastructure information system, and provides an aggregate of subsystems that facilitates the communications, secure access, protective services, and network infrastructure support for all USPTO IT applications.

Enterprise Software Services (ESS): is an Infrastructure information system and provides a variety of services to support USPTO missions.

Database Services (DBS): is an Infrastructure information system, and provides a Database Infrastructure to support the mission of USPTO database needs.

Trilateral Network (TRINET): is an Infrastructure information system, and provides secure network connectivity for electronic exchange and dissemination of sensitive patent data between authenticated endpoints at the Trilateral Offices and TRINET members.

Reed Technology and Information Services (RTIS) Patent Data Capture (PDCap)/SERCO Patent Processing System (PPS); RTIS is an off-campus contractor system that captures critical fields from applicant's applications so that they are pre-loaded into an index file to reduce examiners and public search times. SERCO PPS is a contractor system that receives information from USPTO so that inventory, identification and classification activities can be performed on patent applications.

Patent Capture and Application Processing System – Examination Support (PCAPS ES): is a master system that provides a comprehensive prior art search capability and the retrieval of patent and related information, which comprise text and images of United States (US), European Patent Office (EPO) and Japan Patent Office (JPO patents), US pre-grant publications, Derwent data and IBM Technical Disclosure Bulletins.

Patent Capture and Application Processing System – Initial Processing (PCAPS IP): is an Application information system, and provides support to the USPTO for the purposes of capturing patent applications and related metadata in electronic form; processing applications electronically; reporting patent application processing and prosecution status; and retrieving and displaying patent applications.

Patent Search System – Primary Search and Retrieval (PSS PS): is a master system that processes, transmits and store data and images to support the data-capture and conversion requirements of the USPTO to support the USPTO patent application process.

Patent Search System – Specialized Search and Retrieval (PSS SS): The PSS-SS system is made up of multiple applications that allow Patents examiners and applicants to effectively search the USPTO Patent data repositories.

Service Orientated Infrastructure (SOI): is an infrastructure system that provides a feature-rich and stable platform upon which USPTO applications can be deployed.

Data Storage Management System (DSMS): is an infrastructure system that provides archival and storage capabilities securely to the USPTO. The information system is considered an essential component of USPTO's Business Continuity and Disaster Recovery program.

d) *The purpose that the system is designed to serve*
Patent End to End (PE2E) is a Master system portfolio consisting of next generation Patents Automated Information Systems (AISs) which process applications for the issuance and granting of U.S. Patents. The goal of PE2E is to make the interaction of USPTO's users as simple and efficient as possible in order to accomplish user goals.

e) *The way the system operates to achieve the purpose*
PE2E will be a single web-based examination tool providing users with a unified and robust set of tools.

f) *A general description of the type of information collected, maintained, used, or disseminated by the system*
Published and unpublished Patents data

g) *Identify individuals who have access to information on the system*
Public, Patent Examiner, Legal Instruments Examiners (LIEs), system administrators, PTONet Internal Users, Foreign Offices – JPO, KIPO, SIPO, EPO

h) *How information in the system is retrieved by the user*
Registered patent applicants are provided with unique user accounts to facilitate subsequent secure logins for their application status and update submissions. Patent examiners are granted access to only the patent applications that have been assigned to them.

i) *How information is transmitted to and from the system*
HTTPS is used for all data transmissions to and from the Internet, USPTO DMZ, and PTOnet.

Questionnaire:

1. Status of the Information System
1a. What is the status of this information system?

☐   This is a new information system. *Continue to answer questions and complete certification.*

☐   This is an existing information system with changes that create new privacy risks.

Complete chart below, continue to answer questions, and complete certification.

Changes That Create New Privacy Risks (CTCNPR)					
a. Conversions	☐	d. Significant Merging	☐	g. New Interagency Uses	☐
b. Anonymous to Non-Anonymous	☐	e. New Public Access	☐	h. Internal Flow or Collection	☐
c. Significant System Management Changes	☐	f. Commercial Sources	☐	i. Alteration in Character of Data	☐
j. Other changes that create new privacy risks (specify):					

☐   This is an existing information system in which changes do not create new privacy risks, and there is not a SAOP approved Privacy Impact Assessment. *Continue to answer questions and complete certification.*

☒   This is an existing information system in which changes do not create new privacy risks, and there is a SAOP approved Privacy Impact Assessment (version 01-2015 or 01-2017). *Continue to answer questions and complete certification.*

☐   This is an existing information system in which changes do not create new privacy risks, and there is a SAOP approved Privacy Impact Assessment (version 01-2019 or later). *Skip questions and complete certification.*

1b. Has an IT Compliance in Acquisitions Checklist been completed with the appropriate signatures?

☐   Yes. This is a new information system.

☐   Yes. This is an existing information system for which an amended contract is needed.

☐   No. The IT Compliance in Acquisitions Checklist is not required for the acquisition of equipment for specialized Research and Development or scientific purposes that are not a National Security System.

☒   No. This is not a new information system.

2. Is the IT system or its information used to support any activity which may raise privacy concerns?

NIST Special Publication 800-53 Revision 4, Appendix J, states "Organizations may also engage in activities that do not involve the collection and use of PII, but may nevertheless raise privacy concerns and associated risk. The privacy controls are equally applicable to

those activities and can be used to analyze the privacy risk and mitigate such risk when necessary." Examples include, but are not limited to, audio recordings, video surveillance, building entry readers, and electronic purchase transactions.

☐   Yes. *(Check all that apply.)*

Activities			
Audio recordings	☐	Building entry readers	☐
Video surveillance	☐	Electronic purchase transactions	☐
Other (specify):			

☒   No.

3. **Does the IT system collect, maintain, or disseminate business identifiable information (BII)?**

   As per DOC Privacy Policy: "For the purpose of this policy, business identifiable information consists of (a) information that is defined in the Freedom of Information Act (FOIA) as "trade secrets and commercial or financial information obtained from a person [that is] privileged or confidential." (5 U.S.C.552(b)(4)). This information is exempt from automatic release under the (b)(4) FOIA exemption. "Commercial" is not confined to records that reveal basic commercial operations" but includes any records [or information] in which the submitter has a commercial interest" and can include information submitted by a nonprofit entity, or (b) commercial or other information that, although it may not be exempt from release under FOIA, is exempt from disclosure by law (e.g., 13 U.S.C.)."

   ☒   Yes, the IT system collects, maintains, or disseminates BII.

   ☐   No, this IT system does not collect any BII.

4. **Personally Identifiable Information (PII)**

4a. **Does the IT system collect, maintain, or disseminate PII?**

   As per OMB 17-12: "The term PII refers to information that can be used to distinguish or trace an individual's identity either alone or when combined with other information that is linked or linkable to a specific individual."

   ☒   Yes, the IT system collects, maintains, or disseminates PII about: *(Check all that apply.)*

   ☒   DOC employees
   ☒   Contractors working on behalf of DOC
   ☐   Other Federal Government personnel
   ☒   Members of the public

   ☐ No, this IT system does not collect any PII.

If the answer is "yes" to question 4a, please respond to the following questions.

4b. Does the IT system collect, maintain, or disseminate Social Security numbers (SSNs), including truncated form?

    ☒   Yes, the IT system collects, maintains, or disseminates SSNs, including truncated form.

Provide an explanation for the business need requiring the collection of SSNs, including truncated form.
The SSNs for USPTO employees are cross-referenced to a USPTO HR assigned employee ID. Federal employee SSNs are 9-digits and contractors are the last 2-digits of the SSN. Federal employee SSNs are mandatory key identifiers that facilitate federal personnel data synchronization between USPTO HR payroll and the National Finance Center (NFC) only. The contractor's last two digits of the SSN are minimum administrative requirements for unique employee ID assignment.
Provide the legal authority which permits the collection of SSNs, including truncated form.
•   5 U.S.C. 301, Departmental Regulations •   35 U.S.C. 2, Powers and duties •   35 U.S.C. 6, Patent Trial and Appeal Board •   35 U.S.C. 115, Inventor's Oath or Declaration •   35 U.S.C. 184, Filing of application in foreign country •   35 U.S.C. 261, Ownership; Assignment •   35 U.S.C. 371, National Stage: Commencement •   35 U.S.C. 117, Death or incapacity of inventor •   35 U.S.C. 118, Filing by other than inventor •   35 U.S.C. 122, Confidential status of applications; publication of patent applications •   37 C.F.R. 1.14, Patent applications preserved in confidence

    ☐   No, the IT system does not collect, maintain, or disseminate SSNs, including truncated form.

4c. Does the IT system collect, maintain, or disseminate PII other than user ID?

    ☒   Yes, the IT system collects, maintains, or disseminates PII other than user ID.

    ☐   No, the user ID is the only PII collected, maintained, or disseminated by the IT system.

4d. Will the purpose for which the PII is collected, stored, used, processed, disclosed, or disseminated (context of use) cause the assignment of a higher PII confidentiality impact level?

Examples of context of use include, but are not limited to, law enforcement investigations, administration of benefits, contagious disease treatments, etc.

    ☐   Yes, the context of use will cause the assignment of a higher PII confidentiality impact level.

☒   No, the context of use will not cause the assignment of a higher PII confidentiality impact level.

If any of the answers to questions 2, 3, 4b, 4c, and/or 4d are "Yes," a Privacy Impact Assessment (PIA) must be completed for the IT system. This PTA and the SAOP approved PIA must be a part of the IT system's Assessment and Authorization Package.

CERTIFICATION

☒ I certify the criteria implied by one or more of the questions above **apply** to the PE2E and as a consequence of this applicability, I will perform and document a PIA for this IT system.

☐ I certify the criteria implied by the questions above **do not apply** to the PE2E and as a consequence of this non-applicability, a PIA for this IT system is not necessary.

System Owner	**Chief Information Security Officer**
Name: William Stryjewski Office: Office of Patent Information Management (P/OPIM) Phone: (571) 272-3404 Email: William.Stryjewski@uspto.gov Signature: Users, Stryjewski, William _Digitally signed by Users, Stryjewski, William Date: 2021.02.17 11:31:28 -05'00'_ Date signed: _____	Name: Don Watson Office: Office of the Chief Information Officer (OCIO) Phone: (571) 272-8130 Email: Don.Watson@uspto.gov Signature: DON R Watson _Digitally signed by DON R Watson Date: 2021.02.22 20:24:58 -05'00'_ Date signed: _____
Privacy Act Officer	**Bureau Chief Privacy Officer and Co-Authorizing Official**
Name: John Heaton Office: Office of General Law (O/GL) Phone: (571) 270-7420 Email: Ricou.Heaton@upsto.gov Signature: Users, Heaton, John (Ricou) _Digitally signed by Users, Heaton, John (Ricou) Date: 2021.02.12 13:59:32 -05'00'_ Date signed: _____	Name: Henry J. Holcombe Office: Office of the Chief Information Officer (OCIO) Phone: (571) 272-9400 Email: Jamie.Holcombe@uspto.gov Signature: Users, Holcombe, Henry _Digitally signed by Users, Holcombe, Henry Date: 2021.02.23 11:06:25 -05'00'_ Date signed: _____
Co-Authorizing Official	
Name: Andrew Faile Office: Office of the Commissioner for Patents Phone: (571) 272-8800 Email: Andrew.Faile@uspto.gov Signature: Users, Faile, Andrew _Digitally signed by Users, Faile, Andrew Date: 2021.02.24 16:26:39 -05'00'_ Date signed: _____	

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